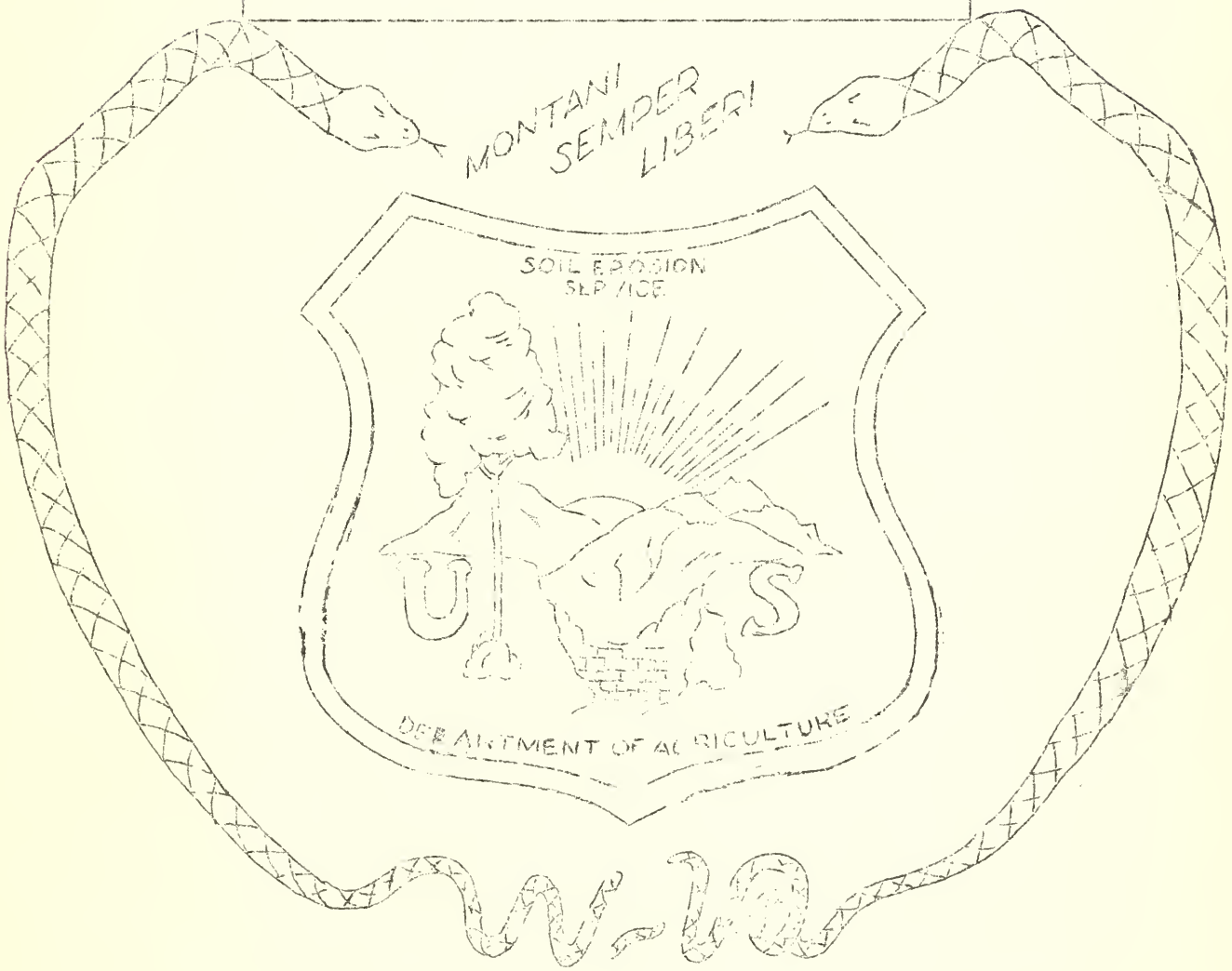
VOL. II APRIL NO. 3

Farm Cooperator



Reedy Creek
SOIL EROSION CONTROL PROJECT
Spencer, W. Va.

SOIL EROSION COMPLIANCE WORK

Members of the Erosion Specialist Division in the Spencer area have confined their efforts in the past few weeks to follow-up work with the 440 farmers already contracted. In other words, no new farms are being signed because it is too late in the season to deliver materials for spring seeding. This compliance work has been important for several reasons.

First, in the rush to get Spring seeding done, farmers started their work before copies of the land program could possibly be mailed out. In any case, it is necessary to go over the plans thoroughly to gain a better understanding of crops and materials. In some instances, contracts were discussed at our monthly Cooperators' meetings. Incidentally, we belive that our monthly Cooperators' meetings have been very helpful to farmers, as well as to the Soil Erosion Service.

Then, again, the spring planting of trees has been under way on a large scale and the Forestry Division asked for assistance in definitely locating all tree areas. Within the past week more than 80 acres have been planted to Kudzu and the location of this fell largely on the contact men. Such things as shortage of materials, revision of contracts, changes in cropping plans, all needed attention.

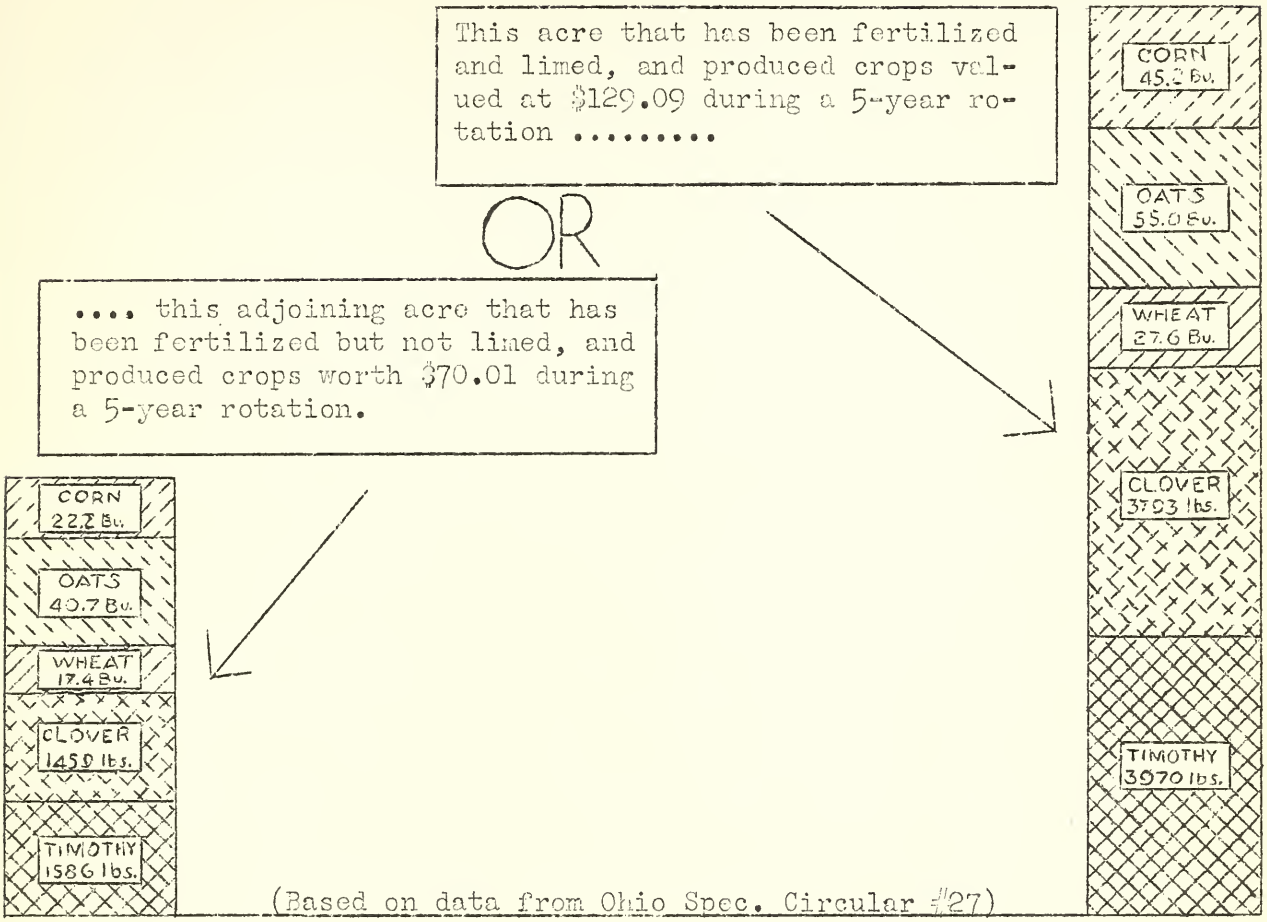
Last, but not least, definite records are being started on the 400 or more alfalfa plots which, we believe, will be highly valuable. Alfalfa is being seeded on many different types of soil; on all degrees of slope and different degrees of erosion; it is being seeded in the fall both without a companion crop and with wheat, and in the spring with oats and winter wheat. Then again, there are plots seeded with fertilizer alone and with lime alone, and again, with different kinds of fertilizer. Results here, we believe, will be definite and Cooperators, as well as the Soil Erosion Service, will watch results with interest. In a very few cases, wheat became too large to seed alfalfa, and in these cases the seeding will be done after the grain is removed.

Seeding conditions have been very unfavorable during March and April due to an excess amount of rain, Not only this, but muddy roads held up delivery of materials. On April 16th, the thermometer went down to 25 degrees and, consequently, alfalfa, wheat and clover suffered. But on the whole, the work looks fairly well. Practically all materials are delivered and most seeds are in the ground, but compliance work will continue for at least some time.

The above mentioned 440 contracted farms represent 37% of the total area in the Reedy Creek project. Added to this is a waiting list of approximately 25% which the contact men have been unable to reach so far. Available figures indicate that 60% of the farmers in the area are interested in saving their soil. This is a rather pleasing indication of the way in which the service is being received, because a large part of the 40% not listed are farms which are either abandoned or the ownership is in doubt, and on top of this, invitation cards are still coming in. This willingness on the part of the farmers to cooperate with the Federal Government is very commendable. On an area of 152,000 acres such as the Spencer Project, it is obvious that a vast amount of work is necessary as well as the close cooperation of all concerned.

The service should not be looked upon as a gift, but rather it is a cooperative undertaking where the land owners see the vision of lasting benefit to the Nation's best natural resource, the land.

WHICH LAND IS WORTH MORE



Land that is used for farming is worth only as much as its ability to produce crops, no more. When a farmer buys or rents land he is making a purchase of its capacity to produce. Any practice or treatment that makes land more productive increases its value. Liming is such a practice.

It is not unusual for a properly limed acre to yield crops with an annual net value of $5.00 to $10.00 more than an adjoining acre that is acid and lime-needy. The average yearly investment in liming material to produce this extra profit is only $2.00 to $4.00 per acre.

This modest investment yields two types of profits:

1. Operating profit obtained by selling the increased yield.

2. Capital profit obtained when the land which has been made more productive is sold or rented.

I T I S G O O D B U S I N E S S T O L I M E T H E S O I L .

WHAT SOIL EROSION MEANS

Some astonishing facts have been brought to light in the survey by the Soils Division of soil erosion conditions in the Reedy Creek project area. Only 4.69 percent, approximately 7,000 acres, of the total 152,000 acres in the area have not been subjected to destructive erosion and this is confined mainly to the narrow stream bottoms. Even the stream bottoms are sometimes subjected to severe cutting by high water, particularly if the land is plowed within twenty feet of the stream bank. The high water also frequently deposits beds of sand and small stones on the surface of the level fields.

The Meigs soils comprise about two-thirds, or 100,000 acres, of the area. None of the 100,000 acres is level. Approximately four percent of these soils occupy slopes of less than 12 percent, 14 to 17 percent of their area occurs on slopes of 12 to 25 percent, 43 to 51 percent occurs on slopes of 25 to 40 percent, and 29 to 42 percent occurs on slopes of more than 40 percent, ranging up to 65 or more percent in steepness.

It has been common practice to clear these steep hillsides where stones are not so numerous as to interfere with cultivation, burn the land over to dispose of brush, then plant to corn for two or three years. Consequently, the topsoil which contains the organic matter and plant food elements is lost at a very rapid rate. Not only is the soil washed off from wide areas by sheet erosion, but gullies form and sometimes destroy the land for any purpose except replanting to trees.

About five percent of the Meigs soils have lost less than one-quarter of the topsoil. That is, about 5,000 of the 100,000 acres, comprising the Meigs group of soils have approximately 80 percent of the original topsoil left. About 69 percent of their area has been robbed of one-quarter to three-quarters of its rich topsoil by washing by heavy rains. Fully 20 percent has lost more than 75 percent of its topsoil, and five percent, or about 5,000 acres, has lost all the topsoil and much of the subsoil. More than 20,000 acres of this group of soils have not more than one inch of surface soil left.

This means that not more than 20,000 acres of the Meigs group of soils should be plowed for crops, and then only when the most careful methods of strip-cropping are employed. In no case should the land be allowed to lie bare through the winter. Freezing and thawing loosens the soil and heavy rains of winter wash it away rapidly.

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THE SOIL

"The soil looks within its embrace the beginning of all life and receives at last their discarded forms. It will outlive all the works of man, transcend all human thoughts. It traces the progress of history and shelters its ignoble end. It speaks eloquently and is dumb. It is the imperishable storehouse of eternity."

--Author unknown.

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"I am bigger than anything that can happen to me. All these things, sorrow, misfortune and suffering are outside my door. I am in the house and I have the key."

--Charles T. Lummis.

DIVERSION DITCHES IN EROSION CONTROL

A diversion ditch as used on this project is an open earth channel constructed to intercept the water flowing from steep slopes to the lower lying bottom lands. It is essentially a storm-water channel and its flow is very irregular. The run-off from the hill lands is rapid and the period of concentration is short so that the water in the ditch rises rapidly, remains at peak stage for only a short time, and subsides quickly. To be successful over any extended period of time the ditch must have ample capacity to carry the run-off from heavy rains.

Where we find a choice piece of bottom land being covered by layers of silt and shale washed down by hill water, highly charged with sediment, we frequently have opportunity to divert such waters through the use of a diversion ditch running around the lower edge of the high ground. The collected water is carried for some distance to a favorable point, where it is emptied into a natural drainage channel. In many instances where we find an area covered by a series of gullies too numerous to attempt any control through the placement of check dams, we resort to the diversion ditch. The ditch is placed across the minor gullies and is emptied into a gully previously selected to carry the bulk of the water. With the water thus carried off it is possible to reclaim the gullies from which the water has been diverted. A few strategically placed dams will keep the main water carrying gully from cutting deeper.

It must be borne in mind that a diversion ditch should not have a very steep fall or grade. One-half of one percent is about as high as should be used. The sides of the ditch must be well sloped and seeded to good cover grasses. It is very important that the diversion ditch outlet be well constructed to avoid excessive cutting. A poor outlet will only start another gully.

We are very glad to assist any of you in designing and laying out contemplated Diversion ditches. Just write us a letter or stop in at the Spencer office to interview us. We are here to serve you.

Remember that a poorly constructed diversion ditch is a hazard to the land rather than a benefit.

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HOLDUP REPORTED

According to measurements made by the Engineering Division of the local Soil Erosion Service, a great deal of valuable topsoil was caught and held by check dams during the recent rains.

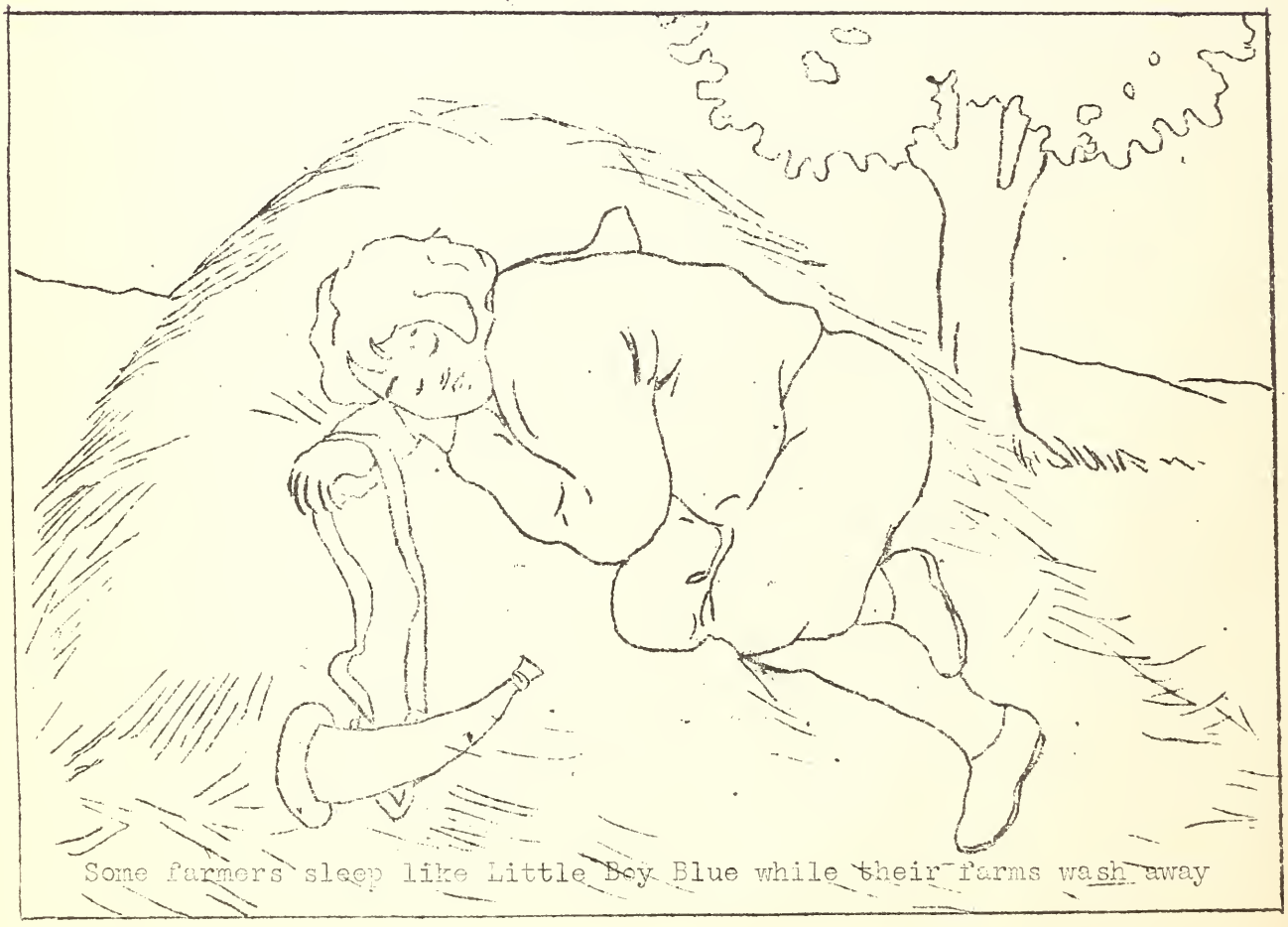
It is estimated that in the vicinity of 864,000 cubic feet of soil was retained in the silting reservoirs of the dams. This represents a total of 77,760,000 pounds, or enough soil to give 13,000 pounds to every man, woman and child living on farms within the Spencer project area. If only the f farms on which the dams are actually located be considered the figures are even more startling. Enough topsoil was held to give every person 32¼ tons. This amounts to about 152 tons per farm worked. If all this topsoil, held in our Spencer project alone, were spread out in an even layer, it would cover 10,360,000 square feet of surface to a depth of one inch which is the equivalent of covering 239 acres to a depth of one inch.

How much soil can be held by a nation-wide program of soil erosion control persistently followed? The amounts given represent only the soil retained by one small phase of our control program. Careful farm management and sane utilization of available resources as advocated account for many times the savings above shown.

UNITED STATES
DEPARTMENT OF AGRICULTURE
Soil Erosion Service

Penalty for private use to
avoid payment of postage $300.

Spencer, West Va.
Official Business



Some farmers sleep like Little Boy Blue while their farms wash away